

WHAT IS CLAIMED IS:

- 1 1. An energy management system in an energy distribution network
2 (DSTR) comprising at least one energy source (SE1) and a number of energy
3 consumers (K1, K2, K3) distributed in different consumption locations such as
4 homes, the system comprising:
5 distributed energy operation means (RXE) and distributed
6 information transmission means (RTI) installed in each consumption location;
7 centralized distributed energy management means (CGED);
8 centralized information transmission means (CTI) which transmits
9 control signals (SC) to the distributed information transmission means (RTI) by
10 remote satellite broadcasting;
11 the distributed information transmission means (RTI) passing the
12 control signals (SC) to the distributed energy operation means (RXE).
- 1 2. The energy management system according to claim 1, wherein the
2 distributed energy operation means (RXE) comprise distributed energy consumption
3 means (RKE) and distributed consumed energy management means (RGE).

1 3. The energy management system according to claim 1, wherein the
2 distributed information transmission means (RTI) includes means for transposing the
3 received control signals (SC) into control signals (SCT1, SCT3) by changing a
4 physical support and/or a format and/or a coding and/or a protocol of the control
5 signals, and means for locally redistributing the transposed control signals (SCT1,
6 SCT3) for transmission to the distributed energy operation means (RXE).

1 4. The energy management system according to claim 3, wherein the
2 means for transposing comprises a universal modulator - demodulator.

1 5. The energy management system according to claim 4, wherein the
2 means for locally redistributing comprise dedicated transmission channels (V1, V3,
3 VTEL) at each consumption location which connect the universal modulator -
4 demodulator (UMD) to the various distributed energy operation means (RXE).

1 6. The energy management system according to claim 5, wherein at least
2 two of these dedicated transmission channels (V1, VTEL) use different physical
3 supports and/or formats and/or coding and/or protocols.

1 7. The energy management system according to claim 3, wherein at least
2 some of the control signals (SC) comprise identification and addressing data, and
3 wherein the distributed information transmission means (RTI) selectively transmit
4 the transposed control signals corresponding to the distributed energy operation
5 means (RXE) as a function of the identification or addressing data contained in
6 them.

1 8. The energy management system according to claim 3 wherein the
2 control signals (SC) include rate data.

1 9. The energy management system according to claim 2, wherein the
2 distributed information transmission means (RTI) performs a local remote transfer
3 operation by which the distributed transmission means (RTI) collect consumed
4 energy meter reading data (MK) output from the distributed consumed energy
5 management means (RGE).

1 10. The energy management system according to claim 2, wherein the
2 distributed information transmission means (RTI) performs a remote reading
3 operation by which consumed energy meter reading data (MK) derived from the
4 distributed consumed energy management means (RGE) are transposed by changing

5 the physical support and/or the format and/or the coding and/or the protocol, and are
6 retransmitted to the centralized information transmission means (CTI).

1 11. The energy management system according to claim 10, wherein the
2 distributed information transmission means (RTI) interfaces with a telephone line
3 (VTEL) for transmitting transposed consumed energy meter reading data (MK) to
4 the centralized transmission means (CTI).

1 12. The energy management system according to claim 1, wherein an
2 energy supplier (F2) at least partly operating the energy source (SE1) to which an
3 energy consumer (K1) is connected is identified by an identification code (IDE2)
4 that is written in the distributed energy operation means (RXE), and/or in the
5 distributed information transmission means (RTI) belonging to this consumer (K1),
6 in association with a meter reading of a consumed energy quantity (MK).

1 13. The energy management system according to claim 1, wherein the
2 energy distribution network (DSTR) is an electrical energy distribution network.

1 14. The energy management system according to claim 13, wherein each
2 consumption location is supplied with energy through an electrical line (LEL1), and
3 the distributed information transmission means (RTI) from at least a first of the

4 consumption locations include a local transceiver (RELEL) connected to this
5 electrical line (LEL1) and capable of receiving signals transposed from the control
6 signals.

1 15. The energy management system according to claim 14, wherein the
2 local transceiver (RELEL) at the first consumption location communicates with the
3 distributed energy operation means (RXE) at this first consumption location through
4 the electrical line (LEL1).

1 16. The energy management system according to claim 1, wherein the
2 distributed information transmission means (RTI) and/or the distributed energy
3 operation means (RXE) store at least one item of information belonging to the set of
4 information composed of an identification of an energy producer (P1, P2), an
5 identification of an energy supplier (F1, F2), an energy rate identification, and an
6 identification of the type of the distributed energy operation means (RXE).

1 17. The energy management system according to claim 1 as applied to
2 check energy exchanges between at least two countries.

1 18. The energy management system according to claim 1 as applied to
2 trigger remote operations to read energy consumption.

1 19. An energy management system, comprising:
2 a centralized information transceiver which operates to issue energy
3 management control signals for wireless transmission;
4 a modem located at energy consumption location, the modem
5 receiving the wirelessly transmitted energy management control signals; and
6 an energy regulation controller also located at the energy
7 consumption location and connected to the modem, the energy regulation controller
8 operating in response to modem received energy management control signals to
9 regulate consumption of energy consuming devices located within the energy
10 consumption location.

1 20. The energy management system of claim 19 further including an
2 energy meter device also located with at the energy consumption location and
3 connected to the modem for communication, the energy meter device operating to
4 measure an amount of energy consumed by the energy consumption location, the
5 measured amount of energy data being communicated to the modem.

1 21. The energy management system of claim 20 wherein the energy
2 meter device is connected to the modem for communication through energy
3 regulation controller.

1 22. The energy management system of claim 20 wherein the energy
2 meter device is connected to the modem through a transceiver device.

1 23. The energy management system of claim 22 wherein the transceiver
2 device facilitates communication between the energy meter device and the modem
3 over energy delivery lines within the energy consumption location.

1 24. The energy management system of claim 19 wherein the modem is
2 connected for communication over a telephone line.

1 25. The energy management system of claim 19 wherein the energy
2 regulation controller operates in response to modem received energy management
3 control signals to regulate consumption by enabling/interrupting consumption.